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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 767,922	01 23 2001	Kazuhiro Hoshino	09792909-4750	1439

26263 7590 06 05 2003

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EXAMINER

GLASS, CHRISTOPHER W

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 06 05 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/767,922

Applicant(s)

HOSHINO, KAZUHIRO

Examiner

Christopher W. Glass

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f):
- a) ☒ All b) ☐ Some \* c) ☐ None of
- 1 ☐ Certified copies of the priority documents have been received.
- 2 ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- 3 ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 119 and 120.

## Attachment(s)

- 1 ☐ A copy of the communication(s) to which this communication is responsive is/are attached.
- 2 ☐ A copy of the application to which this communication is responsive is attached.
- 3 ☐ A copy of the fee receipt is attached.

**DETAILED ACTION*****Response to Arguments***

1. Applicant's arguments filed April 3, 2003 have been fully considered but they are not persuasive. Claims 1-5 were rejected in the previous office action under 35 U.S.C. 103 as being unpatentable over the disclosure of Holberg (U.S. Patent No. 6,172,361 to Holberg et al.), in view of the teachings of Glenn (U.S. Patent No. 6,266,197 to Glenn et al.). Applicant on pages 4-5 traverses these rejections, arguing on page 4 that these references fail to disclose a wiring pattern in an image pickup device wherein the pattern "formed on the light-transmissible board is configured to match an electrode arrangement of the image pickup element and a terminal arrangement of a connector, as recited in amended Claims 1, 4, and 5". Also, applicant contends on page 5 that "neither Holberg et al. nor Glenn et al. teaches or suggests an image pickup device including a lens holder unit comprising a lens which is mounted above the other surface of the light-transmissible board, as recited in amended Claims 4 and 5". It is further argued on page 5 that claims 2 and 3 are allowable by virtue of their dependence. However, the examiner respectfully disagrees that the subject matter of the amended claims is patentable. With respect to the wiring pattern configuration of claim 1, Holberg shows such a pattern in Figures 2A and 3A, comprising wiring bumps **204** that are electrically connected to board traces **302** on the periphery of the light-transmissible board element **101**, such that an electrical connection is formed between the light transmissible board element **101** having aperture **301** and the image configuration which does "match" corresponding electrical connection means of these two

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elements of the image pickup device. Regarding the lens holder unit limitation, the examiner maintains that the configuration disclosed in Figure 3D (and 3A) of Holberg and previously discussed in the prior office action, is functionally equivalent to that of a lens holder unit as claimed. Holberg teaches that the lens **304** is provided as to cover, and therefore is mounted above, the aperture of the light transmissible board and CCD elements of the image pickup element **201** visible therethrough (see also Column 3, lines 43-46). The examiner considers that determining the particular aspects of mounting or holding the lens, such as distance from the aperture or active image pickup elements, only involve matters of design choice to one of ordinary skill in the art, and it would have been obvious to provide the ideal optical configuration which would optimally direct incoming radiation to the pickup elements. With respect to dependent claims 2 and 3, as stated above the examiner maintains that independent claims 1, 4, and 5 are unpatentable, and therefore disagrees that these would be patentable by virtue of dependence; it is held that they are further unpatentable for the reasons stated below. Thus, it is therefore deemed that the following rejections are considered proper.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,172,361 to Holberg et al. (hereafter Holberg), in view of U.S. Patent No. 6,266,197 to Glenn et al. (hereafter Glenn).

Regarding claims 1,2,4, and 5: Holberg shows in Figures 2A and 3A an image pickup device, including a light-transmissible board **101** (comprising aperture **301**) having a wiring pattern **302,203,204** formed on one surface thereof, wherein the wiring pattern is configured to match a corresponding electrical connection arrangement of image pickup element **201**. Image pickup element **201** has a photodetecting portion **202** formed on the same surface, and the image pickup element **201** is mounted in flip-chip style (via bumps **204** and contacting pads **302**) on the one surface of the light-transmissible board **101** so that the photodetecting portion **202** of the image pickup element is opposed to an area where the wiring pattern **203,204,302** is not formed. In the device of Holberg, as shown by Figure 3D, a lens unit **304** is mounted on the other surface of the light-transmissible board **101** so as to be located above the photodetecting portion **202** of the image pickup element **201** (see Column 3, lines 38-41). The light transmissible board **101**, which comprises the aperture **301**, is not specifically taught as containing an optical filter. However, it is well known in the art to provide filters in one or more layers of light-transmissible boards in image pickup device packages. Figure 2 of Glenn et al '97 shows a light transmissible board **122** which can contain an infrared rays cutting filter **1812** (Fig. 18A). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

well known in image pickup device construction to filter certain aspects of incident light through

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this method, as shown by Glenn '197. Lens **304** is taught by Holberg as *covering* the other surface of the light-transmissible board **101**, and while Holberg does not specifically disclose using a *lens holder unit* to dispose the lens above the other surface of the light-transmissible board, the spatial arrangement (e.g. distance and focal configuration) of this element would only involve matters of design choice to one of ordinary skill in the art at the time the invention was made, and it therefore would have been obvious to provide an ideal optical configuration of the lens with respect to the light-transmissible board, such as to optimally direct incoming radiation to the photodetecting portion **202** of the image pickup element **201**. The fact that the preamble of claims 4 and 5 states that the device is part of a camera system or camera module is considered the intended use of the device and is not given patentable weight. There is no structure provided in the body of the claims to define the exact device in which the invention would be used.

Regarding claim 3: As shown by Figure 3C of Holberg, the image pickup element **201** is sealed with "a layer **303** of epoxy or similar sealant" (Column 3, lines 38-39). It therefore would have been obvious to use resin, and to apply this resin to a peripheral edge of the image pickup element, in order to hermetically seal all active areas of element from stray contaminants such as unwanted dirt or radiation, and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

THIS ACTION IS MADE FINAL.

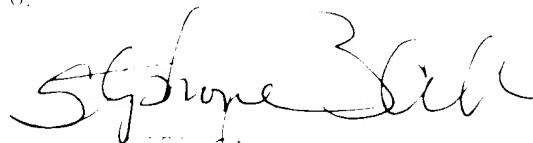
policy as set forth in 37 C.F.R. 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher W. Glass whose telephone number is 703-305-1980. The examiner can normally be reached 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached at 703-308-4852. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



CHRISTOPHER W. GLASS  
REGISTERED PATENT EXAMINER

cg  
May 29, 2003